

U. S. GEOLOGICAL SURVEY
ANNUAL PEAK FLOW FREQUENCY ANALYSIS
Following Bulletin 17-B Guidelines
Program peakfq
(Version 4.0, December, 2000)

Station - 05366500 EAU CLAIRE RIVER NEAR FALL CREEK, WI
2002 MAR 13 09:02:52

I N P U T D A T A S U M M A R Y

Number of peaks in record	=	55
Peaks not used in analysis	=	0
Systematic peaks in analysis	=	55
Historic peaks in analysis	=	0
Years of historic record	=	0
Generalized skew	=	-0.333
Standard error of generalized skew	=	0.550
Skew option	=	WEIGHTED
Gage base discharge	=	0.0
User supplied high outlier threshold	=	--
User supplied low outlier criterion	=	--
Plotting position parameter	=	0.00

***** NOTICE -- Preliminary machine computations. *****
***** User responsible for assessment and interpretation. *****

WCF134I-NO SYSTEMATIC PEAKS WERE BELOW GAGE BASE.	0.0
WCF198I-LOW OUTLIERS BELOW FLOOD BASE WERE DROPPED.	1 1159.2
WCF163I-NO HIGH OUTLIERS OR HISTORIC PEAKS EXCEEDED HHBASE.	45227.5

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2002 MAR 13 09:02:52

ANNUAL FREQUENCY CURVE PARAMETERS -- LOG-PEARSON TYPE III

	FLOOD BASE		LOGARITHMIC		
	EXCEEDANCE DISCHARGE	PROBABILITY	MEAN	STANDARD	SKEW
				DEVIATION	
SYSTEMATIC RECORD	0.0	1.0000	3.8898	0.2945	-0.650
BULL.17B ESTIMATE	1159.2	0.9818	3.9004	0.2703	-0.277

ANNUAL FREQUENCY CURVE -- DISCHARGES AT SELECTED EXCEEDANCE PROBABILITIES

ANNUAL EXCEEDANCE PROBABILITY	BULL.17B ESTIMATE	SYSTEMATIC RECORD	'EXPECTED PROBABILITY'	95-PCT CONFIDENCE LIMITS FOR BULL. 17B ESTIMATES	
			ESTIMATE	LOWER	UPPER
0.9950	--	900.0	--	--	--
0.9900	--	1171.0	--	--	--
0.9500	2726.0	2278.0	2640.0	2122.0	3315.0
0.9000	3523.0	3147.0	3454.0	2847.0	4182.0
0.8000	4756.0	4526.0	4711.0	3989.0	5524.0
0.5000	8181.0	8346.0	8181.0	7118.0	9417.0
0.2000	13510.0	13870.0	13620.0	11620.0	16140.0
0.1000	17290.0	17410.0	17550.0	14610.0	21290.0
0.0400	22230.0	21580.0	22820.0	18360.0	28380.0
0.0200	25980.0	24440.0	26910.0	21120.0	33970.0
0.0100	29770.0	27080.0	31150.0	23840.0	39780.0
0.0050	33600.0	29530.0	35540.0	26550.0	45800.0
0.0020	38750.0	32510.0	41640.0	30120.0	54090.0
0.6667	6229.1	(1.50-year flood)			
0.4292	9144.9	(2.33-year flood)			

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2002 MAR 13 09:02:52

I N P U T D A T A L I S T I N G

WATER YEAR	DISCHARGE	CODES	WATER YEAR	DISCHARGE	CODES
1943	16800.0		1974	6600.0	
1944	3620.0		1975	3500.0	
1945	11500.0		1976	8000.0	
1946	10100.0		1977	2400.0	
1947	8100.0		1978	11900.0	
1948	5430.0		1979	9800.0	
1949	3430.0		1980	19700.0	
1950	4750.0		1981	6600.0	
1951	13800.0		1982	12600.0	
1952	15700.0		1983	12600.0	
1953	9140.0		1984	3450.0	
1954	14000.0		1985	4250.0	
1955	17200.0		1986	20800.0	
1958	8590.0		1987	9900.0	
1960	12600.0		1988	4750.0	
1961	3000.0		1989	21400.0	
1962	2800.0		1990	14300.0	
1963	7080.0		1991	6700.0	
1964	900.0		1992	7200.0	
1965	10600.0		1993	24500.0	
1966	4150.0		1994	12100.0	
1967	20500.0		1995	2350.0	
1968	8500.0		1996	5910.0	
1969	10900.0		1997	9830.0	
1970	3700.0		1998	8390.0	
1971	7650.0		1999	3710.0	
1972	6350.0		2000	8860.0	
1973	16400.0				

Explanation of peak discharge qualification codes

PEAKFQ	WATSTORE	
CODE	CODE	DEFINITION
D	3	Dam failure, non-recurrent flow anomaly
G	8	Discharge greater than stated value
X	3+8	Both of the above
L	4	Discharge less than stated value
K	6 OR C	Known effect of regulation or urbanization
H	7	Historic peak

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 2002 MAR 13 09:02:52

EMPIRICAL FREQUENCY CURVES -- WEIBULL PLOTTING POSITIONS

WATER YEAR	RANKED DISCHARGE	SYSTEMATIC RECORD	BULL.17B ESTIMATE
1993	24500.0	0.0179	0.0179
1989	21400.0	0.0357	0.0357
1986	20800.0	0.0536	0.0536
1967	20500.0	0.0714	0.0714
1980	19700.0	0.0893	0.0893
1955	17200.0	0.1071	0.1071
1943	16800.0	0.1250	0.1250
1973	16400.0	0.1429	0.1429
1952	15700.0	0.1607	0.1607
1990	14300.0	0.1786	0.1786
1954	14000.0	0.1964	0.1964
1951	13800.0	0.2143	0.2143
1960	12600.0	0.2321	0.2321
1982	12600.0	0.2500	0.2500
1983	12600.0	0.2679	0.2679
1994	12100.0	0.2857	0.2857
1978	11900.0	0.3036	0.3036
1945	11500.0	0.3214	0.3214
1969	10900.0	0.3393	0.3393
1965	10600.0	0.3571	0.3571
1946	10100.0	0.3750	0.3750
1987	9900.0	0.3929	0.3929
1997	9830.0	0.4107	0.4107
1979	9800.0	0.4286	0.4286
1953	9140.0	0.4464	0.4464
2000	8860.0	0.4643	0.4643
1958	8590.0	0.4821	0.4821
1968	8500.0	0.5000	0.5000
1998	8390.0	0.5179	0.5179
1947	8100.0	0.5357	0.5357
1976	8000.0	0.5536	0.5536
1971	7650.0	0.5714	0.5714
1992	7200.0	0.5893	0.5893
1963	7080.0	0.6071	0.6071
1991	6700.0	0.6250	0.6250
1974	6600.0	0.6429	0.6429
1981	6600.0	0.6607	0.6607
1972	6350.0	0.6786	0.6786
1996	5910.0	0.6964	0.6964
1948	5430.0	0.7143	0.7143
1950	4750.0	0.7321	0.7321
1988	4750.0	0.7500	0.7500
1985	4250.0	0.7679	0.7679
1966	4150.0	0.7857	0.7857
1999	3710.0	0.8036	0.8036
1970	3700.0	0.8214	0.8214
1944	3620.0	0.8393	0.8393
1975	3500.0	0.8571	0.8571

1984	3450.0	0.8750	0.8750
1949	3430.0	0.8929	0.8929
1961	3000.0	0.9107	0.9107
1962	2800.0	0.9286	0.9286
1977	2400.0	0.9464	0.9464
1995	2350.0	0.9643	0.9643
1964	900.0	0.9821	0.9821

